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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,185	07/29/2003	Hidefumi Yoshizoe	NEC 219824	7204
27667	7590	04/08/2005	EXAMINER	
HAYES, SOLOWAY P.C. 130 W. CUSHING STREET TUCSON, AZ 85701			SCHECHTER, ANDREW M	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,185

Applicant(s)

YOSHIZOE, HIDEFUMI

Examiner

Andrew Schechter

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 2,5,7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 28 January 2005 have been fully considered but they are not persuasive.

The applicant argues that *Furushima*, *Sakai*, and *Lee* do not teach forming an air outlet with the seal member and the air outlet auxiliary member. This is not persuasive. First, each reference teaches all the claimed features, as particularly pointed out by the examiner in the rejections. Second, the amended limitation in claim 11 "said air [outlet] forming members are formed with said auxiliary member" (meaning that the two are formed at the same time, not necessarily that they are attached to each other), is either met by the references or would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding claim 1, the applicant argues that *Lee* does not teach connecting the opening in the main seal lines 210 with the first auxiliary seal line 220. This is not persuasive, since (whatever *Lee* shows) this is not recited in the claim limitations.

Claim Objections

2. Claim 11 is objected to because of the following informalities: "said air forming members" should be "said air outlet forming members". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Furushima et al.*, U.S. Patent No. 5,410,423.

Furushima discloses a method of manufacturing a liquid crystal display panel, the method comprising: preparing a first substrate [1] and a second substrate [2]; forming a seal member [3], an auxiliary member [4], and air outlet forming members [vertical extensions of 3 at the top of each region 8] on one of said substrates, wherein said seal member formed an internal space [8] and has an injection inlet [the opening in 3] for liquid crystal injection, said auxiliary member is arrayed around said seal member, and said air outlet forming member is connected to said injection inlet and extended toward a peripheral end of said panel; attaching said first substrate to said second substrate with said seal member and said auxiliary member to form said panel [see Fig. 2]; positioning a cut line [7] between said seal member and said auxiliary member; cutting said panel along said cut line; and injecting liquid crystal through said injection inlet [col. 3, lines 25-32].

Furushima may or may not disclose the amended limitation that the air outlet forming members are formed with said auxiliary member. It would have been obvious to one of ordinary skill in the art at the time of the invention to make these two features

at the same time, motivated by the efficiency of making them using a single production step. Claim 11 is therefore unpatentable.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sakai et al.*, U.S. Patent No. 6,222,603.

Sakai discloses [see Figs. 2-4] a method of manufacturing a liquid crystal display panel, the method comprising: preparing a first substrate [2a] and a second substrate [2b]; forming a seal member [6], an auxiliary member [11], and air outlet forming members [horizontal extensions of the main part of 6] on one of said substrates, wherein said seal member formed an internal space [7] and has an injection inlet [between the air outlet forming members] for liquid crystal injection, said auxiliary member is arrayed around said seal member, and said air outlet forming member is connected to said injection inlet and extended toward a peripheral end of said panel; attaching said first substrate to said second substrate with said seal member and said auxiliary member to form said panel [see Fig. 2]; positioning a cut line between said seal member and said auxiliary member and cutting said panel along said cut line [col. 5, lines 11-12, 35-39]; and injecting liquid crystal through said injection inlet [col. 5, lines 12-21].

Sakai may or may not disclose the amended limitation that the air outlet forming members are formed with said auxiliary member. It would have been obvious to one of ordinary skill in the art at the time of the invention to make these two features at the same time, motivated by the efficiency of making them using a single production step. Claim 11 is therefore unpatentable.

An air outlet auxiliary member [the separate vertical section of 6 on the right side] is further formed on one of said substrates within said air outlet forming members.

Claim 12 is therefore unpatentable.

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lee et al.*, US 2001/0022645.

Lee discloses [see Fig. 9, for instance] a method of manufacturing a liquid crystal display panel, the method comprising: preparing a first substrate [1] and a second substrate [201]; forming a seal member [210], an auxiliary member [220, etc.], and air outlet forming members [vertical extensions of 210 at bottom of Fig. 9B] on one of said substrates, wherein said seal member formed an internal space [inside 210] and has an injection inlet [between the air outlet forming members] for liquid crystal injection, said auxiliary member is arrayed around said seal member, and said air outlet forming member is connected to said injection inlet and extended toward a peripheral end of said panel; attaching said first substrate to said second substrate with said seal member and said auxiliary member to form said panel [see Fig. 9A]; positioning a cut line between said seal member and said auxiliary member, cutting said panel along said cut line, and injecting liquid crystal through said injection inlet [paragraphs 0013, 0014, 0056, etc.].

Lee may or may not disclose the amended limitation that the air outlet forming members are formed with said auxiliary member. It would have been obvious to one of ordinary skill in the art at the time of the invention to make these two features at the

same time, motivated by the efficiency of making them using a single production step.

Claim 11 is therefore unpatentable.

An air outlet auxiliary member [upside down “u” shapes in Fig. 9B] is further formed on one of said substrates within said air outlet forming members. Claim 12 is therefore unpatentable.

7. Claims 1, 3, 4, 6, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lee et al.*, US 2001/0022645 as applied to claims 11 and 12 above, in view of *Ishiwata et al.*, U.S. Patent No. 5,858,482.

Regarding claims 11 and 12, it might be argued that *Lee* does not explicitly show the position of a cut line in Fig. 9B, so it does not disclose the cut line being between the seal member and the auxiliary member. The examiner does not agree, since the auxiliary member is located in the unneeded “edges of the attached substrates” which are “cut away” [paragraph 0056]. However, to forestall this argument, the examiner notes that *Ishiwata* discloses [see Fig. 3] a cut line “L” disposed near the end of the equivalent air outlet forming members (which would be between the seal member and the auxiliary member in *Lee*), and it would have been obvious to one of ordinary skill in the art at the time of the invention to do so in the method of *Lee*, motivated by the desire “to expose the injection port at the cut edges of the substrates” [col. 8, lines 1-6], thus making an accessible injection port, and to make the non-display area of the LCD as small as possible. Claims 11 and 12 are therefore unpatentable.

Considering the additional limitations of claim 1 over those of claim 12, claim 1 recites cutting said panel along said scribe line to traverse said air outlet forming

members. Since *Lee* is silent on the exact location of its scribe line, as discussed in the above paragraph, it does not disclose this limitation of claim 1.

Ishiwata discloses [see Fig. 3, for instance] cutting the panel along a cut line (or scribe line) to traverse the air outlet forming members [the horizontal sections of 12 to the right]. (The examiner understands the term "traverse" to include crossing at the edge of the members as shown in Fig. 3.) As discussed above, it would have been obvious to one of ordinary skill in the art at the time of the invention to cut the panel so in the method of *Lee*, motivated by the desire "to expose the injection port at the cut edges of the substrates" [col. 8, lines 1-6], thus making an accessible injection port, and to make the non-display area of the LCD as small as possible. Claim 1 is therefore unpatentable.

The air outlet forming member is aligned parallel to said air outlet auxiliary member in order to maintain a constant gap therebetween, so claim 3 is also unpatentable. The air outlet auxiliary member and the air outlet forming member extend toward the peripheral end of the panel, so claim 4 is also unpatentable. There are a plurality of injection inlets and air outlets, so claim 9 is also unpatentable. The method is used to make a liquid crystal display panel, so claim 10 is also unpatentable.

Lee discloses [see claims 12 and 13, for instance] that the seal member, the auxiliary member, the air outlet auxiliary member, and the air outlet forming member are all formed using a dispenser-print method. It does not explicitly disclose that they are all simultaneously formed and made of the same material. It would have been obvious to one of ordinary skill in the art at the time of the invention to form them all simultaneously

of the same material, motivated by the desire to avoid the unnecessary additional manufacturing steps involved in separately forming these members. Claim 6 is therefore unpatentable.

Allowable Subject Matter

8. Claims 2, 5, 7, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the method of claim 2, in particular the additional limitation that the air outlet auxiliary member is positioned between the cut line and the peripheral end of the panel in order not to be cut when the panel is cut off. Claim 2 would therefore be allowed if rewritten appropriately.

The prior art does not disclose the method of claim 5, in particular the additional limitation that the auxiliary member, the air outlet auxiliary member and the air outlet forming member formed at an external domain of the cut line, are all continuously formed as dashed lines. Claim 5 would therefore be allowed if rewritten appropriately.

The prior art does not disclose the method of claim 7, in particular the additional limitation that a gap between the air outlet auxiliary member and the air outlet forming member is 2 mm or more but not more than 7 mm. Claim 7 would therefore be allowed if rewritten appropriately.

The prior art does not disclose the method of claim 8, in particular the additional limitation that a gap between the peripheral end of the panel and the distal ends of both the air outlet auxiliary member and the air outlet forming member is not more than 3 mm. Claim 8 would therefore be allowed if rewritten appropriately.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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5 April 2005